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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

In the claims:

1. (Canceled)

2. (Previously presented) An agonist analog of amylin having the sequence des-^{1}Lys^{25}Pro^{26}Val^{28,29}Pro-h-amylin (SEQ ID NO: 40).

3. (Previously presented) The agonist analog of amylin of claim 2 as an acetate salt.

4. (Previously presented) The agonist analog of amylin of claim 12 as an acetate salt.

5. (Previously presented) The agonist analog of amylin of claim 2 as a hydrochloride salt.

6. (Previously presented) A method of treating diabetes mellitus in a mammal comprising administering the agonist analog of amylin of claim 2 to the mammal.

7. (Previously presented) A method of treating diabetes mellitus in a mammal comprising administering the agonist analog of amylin of claim 3 to the mammal.

8. (Previously presented) A method of treating diabetes mellitus in a mammal comprising administering the agonist analog of amylin of claim 4 to the mammal.

9. (Previously presented) A method of treating diabetes mellitus in a mammal comprising administering the agonist analog of amylin of claim 12 to the mammal.

10. (Previously presented) The method of claim 6 further comprising administration of insulin.

11. (Previously presented) A composition comprising a therapeutically effective amount of the agonist analog of amylin of claim 12 and insulin.

12. (Previously presented) An agonist analog of amylin having the amino acid sequence of (SEQ ID NO: 44) $^{1}A_1$-X-Asn-Thr-^{5}Ala-Thr-Y-Ala-Thr-^{10}Gln-Arg-Leu-B_1-Asn-^{15}Phe-Leu-C_1-D_1-E_1-$^{20}F_1$-G_1-Asn-H_1-Gly-$^{25}I_1$-J_1-Leu-K_1-L_1-^{30}Thr-M_1-Val-Gly-Ser-^{35}Asn-Thr-Tyr-Z, wherein

A_1 is Lys, Ala, Ser or hydrogen,

B_1 is Ala, Ser or Thr;

C_1 is Val, Leu or Ile;

D_1 is His or Arg;

E_1 is Ser or Thr;

F_1 is Ser, Thr, Gln or Asn;

G_1 is Asn, Gln or His;

H_1 is Phe, Leu or Tyr;

I_1 is Ala or Pro;

J_1 is Ile, Val, Ala or Leu;

K_1 is Ser, Pro, Leu, Ile or Thr;

L_1 is Ser, Pro or Thr;

M_1 is Asn, Asp, or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage; and

Z is hydroxy, amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that when

(a) A_1 is Lys, B_1 is Ala, C_1 is Val, D_1 is His, E_1 is Ser, F_1 is Ser, G_1 is Asn, H_1 is Phe, I_1 is Ala, J_1 is Ile, K_1 is Ser, L_1 is Ser, and M_1 is Asn (SEQ ID NO: 45);

(b) A_1 is Lys, B_1 is Ala, C_1 is Ile, D_1 is Arg, E_1 is Ser, F_1 is Ser, G_1 is Asn, H_1 is Leu, I_1 is Ala, J_1 is Ile, K_1 is Ser, L_1 is Pro, and M_1 is Asn (SEQ ID NO: 46);

(c) A_1 is Lys, B_1 is Ala, C_1 is Val, D_1 is Arg, E_1 is Thr, F_1 is Ser, G_1 is Asn, H_1 is Leu, I_1 is Ala, J_1 is Ile, K_1 is Ser, L_1 is Pro, and M_1 is Asn (SEQ ID NO: 47);

(d) A_1 is Lys, B_1 is Ala, C_1 is Val, D_1 is Arg, E_1 is Ser, F_1 is Ser, G_1 is Asn, H_1 is Leu, I_1 is Pro, J_1 is Val, K_1 is Pro, L_1 is Pro, and M_1 is Asn (SEQ ID NO: 48);

(e) A_1 is Lys, B_1 is Ala, C_1 is Val, D_1 is His, E_1 is Ser, F_1 is Asn, G_1 is Asn, H_1 is Leu, I_1 is Pro, J_1 is Val, K_1 is Ser, L_1 is Pro, and M_1 is Asn (SEQ ID NO: 49); or

(f) A_1 is Lys, B_1 is Thr, C_1 is Val, D_1 is Arg, E_1 is Ser, F_1 is Ser, G_1 is His, H_1 is Leu, I_1 is Ala, J_1 is Ala, K_1 is Leu, L_1 is Pro, and M_1 is Asp (SEQ ID NO: 50);

then one or more of any of A_1 to M_1 is a D-amino acid and Z is not amino;

as a salt.

13. (Previously presented) The method of claim 9 further comprising administration of insulin.

14. (Previously presented) A method of treating diabetes mellitus in a mammal comprising administering the composition of claim 11.

15. (Previously presented) The method of claim 8 wherein the diabetes mellitus is type I diabetes.

16. (Previously presented) The method of claim 8 wherein the diabetes mellitus is insulin-requiring type II diabetes.

17. (Previously presented) The method of claim 9 wherein the diabetes mellitus is type I diabetes.

18. (Previously presented) The method of claim 9 wherein the diabetes mellitus is insulin-requiring type II diabetes.

19. (Previously presented) The method of claim 9 wherein the agonist analog of amylin is given by intravenous, intramuscular, nasal, oral, or transdermal administration.

20. (Previously presented) The method of claim 14 wherein the composition is given by intravenous, intramuscular, nasal, oral or transdermal administration.